



MAIL STOP APPEAL BRIEF-PATENTS  
Atty. Docket No. 0512-1190  
PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE  
THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Etienne GALMICHE et al.

Conf. 1809

Application No. 10/724,754

Group 3616

Filed December 2, 2003

Examiner L. McCreary

SET OF EQUIPMENT COMPRISING AN INFLATABLE  
STRUCTURE AND MEANS FOR GUIDING ITS DEPLOYMENT,  
AND CORRESPONDING MOTOR VEHICLE

**APPEAL BRIEF**

MAY IT PLEASE YOUR HONORS:

May 23, 2007

**(i) Real Party in Interest**

The real party in interest in this appeal is the assignees, Faurecia Industries of Nanterre, France and SNPE Materiaux Energetiques of Paris, France.

**(ii) Related Appeals and Interferences**

None.

**(iii) Status of Claims**

Claims 1-2 and 4-7 are pending, from whose final rejection this appeal is taken. Claim 3 was cancelled.

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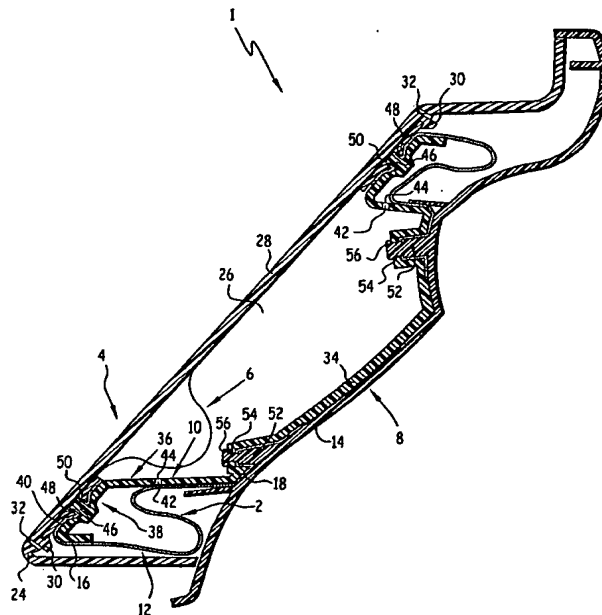
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(iv) Status of Amendments

There are no outstanding amendments. The claims have not been amended since the July 12, 2006 amendment. These claims were finally rejected by the Official Action mailed October 10, 2006 (the "Official Action").

(v) Summary of Claimed Subject Matter

The invention is a set of equipment for a motor vehicle and finds application, for example, in inflatable structures for protecting the knees of motor vehicle occupants (specification page 1, lines 18-21). Claim 1 is the sole independent.

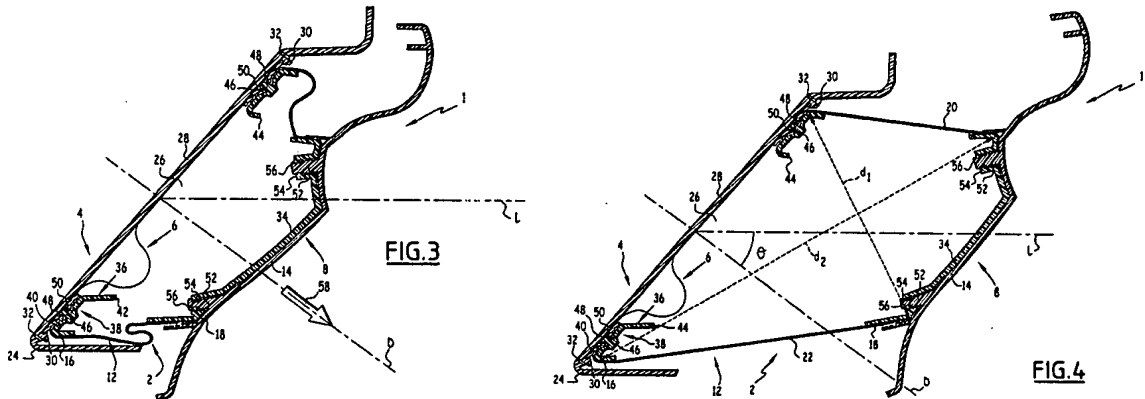


**FIG.1**

The set of equipment 1 is illustrated in Figure 1.

With reference to the specification beginning with page 4,

line 4, there is an inflatable structure 2 comprising a side wall 12 and an end wall 14. The inflatable structure has a folded configuration and a deployed configuration. Also provided is a support 4 and a means 6 for inflating in a direction of inflation (D) in order to deploy the structure. The inflation is shown in Figures 3-4.



In the passage spanning specification pages 5-6, there is disclosed a plate 8 for spreading the load when an occupant of the vehicle impacts on the deployed inflatable structure.

When deploying, the structure is guided so that, in the deployed configuration, the structure extends along a median directrix line (L) distinct from the direction of inflation (D) (Figure 4). The guide means comprises the side wall 12 of the structure which, in the deployed configuration, is substantially taut.

Beginning with line 26 of specification page 7, there is disclosed that a sheath 12 forms the side wall of the

inflatable structure (located at bottom of Figure 1). The sheath comprises an open first end 16 fixed to the support 4 and an open second end 18 fixed to the load-spreading plate 8, the load-spreading plate 8 closing off the open second end 18 to form the end wall of the inflatable structure.

**(vi) Ground of Rejection to be Reviewed on Appeal**

A sole ground of rejection on appeal is whether claims 1-2 and 4-7 were properly rejected as unpatentable under §103 as obvious over SCHROTER 6,131,950 in view of LANG 5,536,043.

**(vii) Arguments**

Arguments Concerning the Ground of Rejection

SCHROTER discloses a knee restraint. Figures 2-3 show a sidewall 18, a support 30, and a plate 10.

FIG. 2

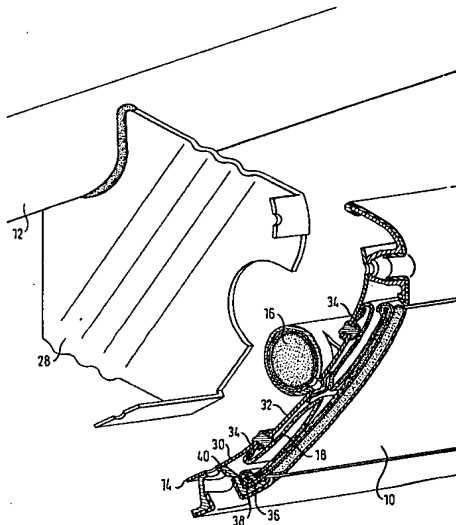
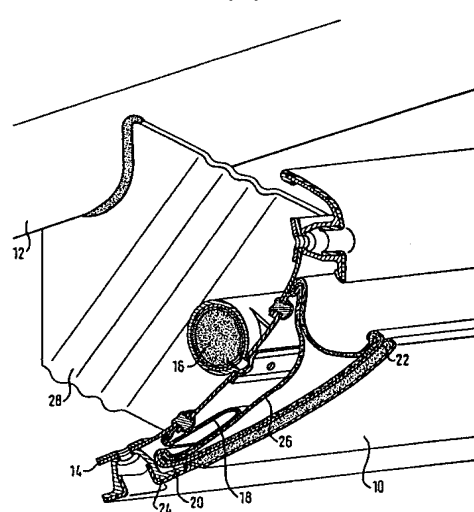


FIG. 3

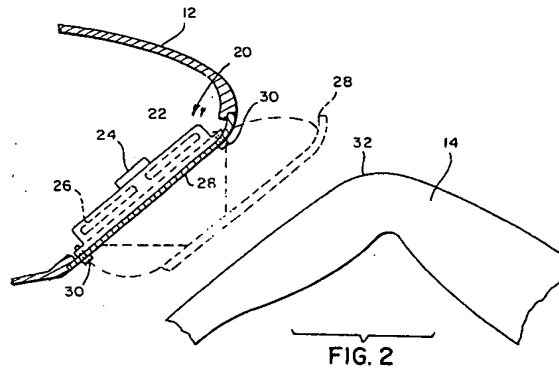


On page 4, paragraph 2, the Examiner acknowledges that SCHROTER does not teach the recited sheath forming the side wall of the inflatable structure and comprising an open first end fixed to the support and an open second end fixed to the load-spreading plate, the load-spreading plate closing off the open second end to form the end wall of the inflatable structure.

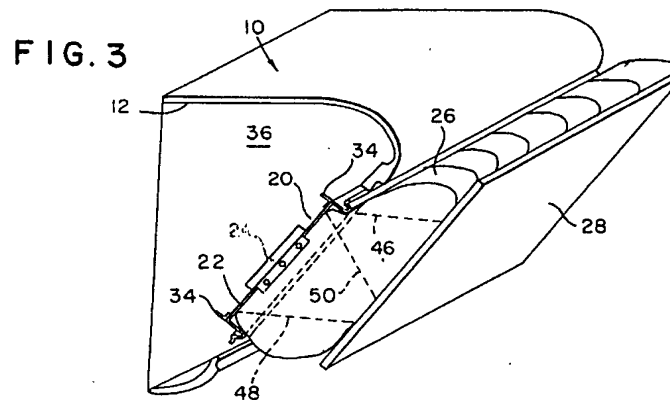
The Examiner offers LANG as disclosing a knee bolster that teaches an air bag 26 with an open second end fixed to a load spreading plate 28 (Official Action page 4, lines 3-7 and pages 5-6 generally). The Examiner's statement is incorrect, as air bag 26 does not have an open second end, and therefore there can be no open second end fixed to load spreading plate 28.

The Examiner misunderstands what is disclosed by LANG as to air bag 26. The air bag 26 is not the innovative part of the LANG invention and is not greatly detailed. LANG does not disclose the recited sheath structure and indeed any conclusion concerning an open second end or any connection of air bag 26 to knee bolster panel 28 is speculative.

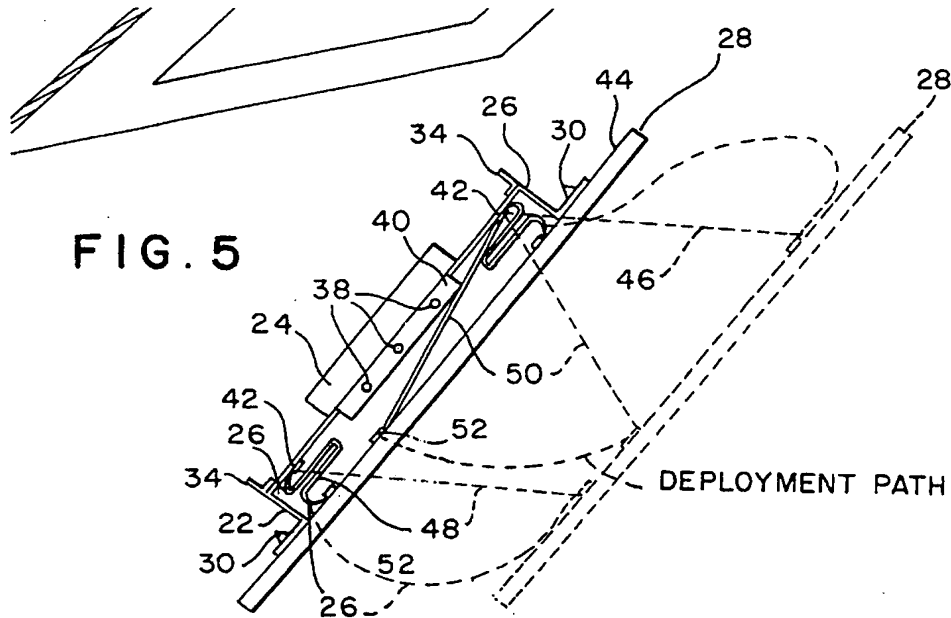
In the DESCRIPTION OF THE PREFERRED EMBODIMENT section, it is disclosed that LANG Figure 2 shows the activated knee bolster 20 with a reaction canister 22, an inflator 24, an inflatable air bag 26 that is stored within the reaction canister 22, and a knee bolster panel 28. The knee bolster panel 28 also is shown by dotted lines in a deployed position closer to the leg 14 of the occupant.



Beginning with line 21 of column 4 and as indicated in Figure 3, when deployed the air bag 26 is tubular in shape having a rectangular cross section.



At one end of the tubular arrangement thereof, the air bag 26 is securely attached in any suitable sealing conventional manner, as by means of a suitable first retaining ring 42 (Figure 5 below), to the reaction canister 22, internally and adjacent the periphery thereof. At the other end thereof the air bag 26, when deployed, engages the forward facing wall 44 of the knee bolster panel 28.



When installed, in the automotive vehicle, as illustrated in FIG. 5, the air bag 26 is suitably folded and stored in the housing or reaction canister 22 between the inflator 24 and the panel 28. During deployment, pressure acting on the back of the panel 28 from the inflating air bag 26 creates a force sufficient to separate the panel 28 from the housing 22.

See column 2, lines 30-33 which make clear that the inflated airbag 26 provides support to the entire surface area of the panel 28. From this, it is clear that the second end of the airbag is closed, as such support cannot be provided by an open end and these Figure 5 dashed lines mean that the airbag 26 as a bottom at the second end in order to support the entire surface of the panel 28.

The LANG invention is about the tethers providing forces to resist the panel 28 when activated. Parallel tethers 46 and 48 and a diagonal or positional tether 50 are located internally of the inflatable air bag 26. The spaced parallel tethers 46 and 48 and the positional tether 50 are contained inside of the inflatable air bag 26 or bladder 26 so as not to interfere with the deployment of the inflating air bag. The tethers direct movement to position the panel 28 in the proper location.

The inflated air bag 26 provides support to the entire surface area of the panel 28. Tethers 46 and 48 are attached to the panel 28 and the housing 22 at positions midway the width thereof (column 5, lines 30-34).

From the actual disclosure of LANG, one of skill can not determine that air bag 26 is connected to knee bolster panel 28 or that air bag 26 has an open second end. The drawing figures do not clearly show the air bag 26 in detail and rather provide only small scale illustrations using dotted lines.

Claim 1 recites an inflatable structure comprising a side wall and an end wall with a guide means guiding the structure as the structure deploys, wherein the guide means comprise the side wall of the structure which, in the deployed configuration, is substantially taut, and wherein a sheath forms the side wall of the inflatable structure.

The sheath is recited as comprising 1) an open first end fixed to the support and 2) an open second end fixed to the load-spreading plate, the load-spreading plate closing off the open second end to form the end wall of the inflatable structure.

LANG does disclose that the air bag 26 is securely attached in any suitable sealing conventional manner, as by means of a suitable first retaining ring 42 to the reaction canister 22, internally and adjacent the periphery thereof. Thus, a first open end is attached to the reaction canister 22.

There is, however, no disclosure of any second open end. Rather, LANG explicitly discloses that, when deployed, the air bag 26 engages the forward facing wall 44 of the knee bolster panel 28. Thus, LANG discloses a folded bag that upon being pressurized acts against and engages the wall 44 of knee bolster panel 28 such that the inflated air bag 26 provides support to the entire surface area of the panel 28. See from Figure 5 that the air bag 26 itself is not taut upon deployment but rather the tethers 46, 48 are taut.

In the Advisory Action of March 2, 2007, the Examiner states that LANG column 5, lines 15-19 "describes the retaining ring that secures the open-ended airbag to the plate while allowing the internal tethers to be affixed directly to the panel."

The sentence within lines 15-19 actually discloses that "The retaining ring 52 may be 'E' Shaped so that all of the

tethers 46, 48 and 50 are attached to the forward facing side 44 of the knee bolster panel 28 at a position substantially midway thereof." There is no reference to the airbag 26 being open-ended or to the tethers being affixed directly to the panel 28.

Rather, see column 4, beginning at line 52 (emphasis added): "As shown in FIGS. 3 and 5, spaced parallel tethers 46 and 48 and a diagonal or positional tether 50 are located internally of the inflatable air bag 26. A first end of each of the tethers 46, 48 and 50 is securely attached to the reaction canister or housing 22 by the retaining ring 42, with the attachment of the first end of the tether 50 to the housing 22 being adjacent the attachment of the most elevated of the parallel tether first end attachments thereto. The second end of each of the tethers 46, 48 and 50 is attached to the forward facing side of the panel 28 by a first retaining ring 52 which is positioned internally of the air bag 26, with the attachment of the second end of the diagonal tether 50 to the panel 28 being adjacent the least elevated of the parallel tether second end attachments thereto. The inflating gas inlet or mouth of the air bag 26 is also attached to the housing 22 by the retaining ring 42."

Any conclusion as to the LANG airbag having an open second end is speculation by the Examiner.

In the present invention, the sheath serves as both the side wall and the guide means. Claim 1 requires the guide means

comprise the side wall of the structure which, in the deployed configuration, is substantially taut, and wherein the sheath forms the side wall of the inflatable structure. The air bag 26 of LANG is not taut when deployed. The air bag 26 of LANG is not the guide means (rather the tethers are the guide means). Therefore, LANG does not disclose a sheath which is both the side wall and the guide means.

Again, LANG does not disclose that air bag 26 comprises an open second end fixed to the load-spreading plate, the load-spreading plate closing off the open second end to form the end wall of the inflatable structure.

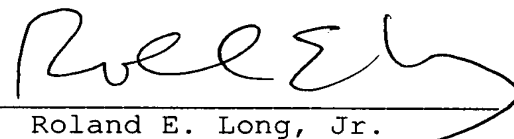
Thus, even if the two references were combined, SCHROTER modified in view of LANG would not teach the claimed invention. Therefore, the obviousness rejection is improper.

Reversal of the obviousness rejection is earnestly requested.

Respectfully submitted,

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(viii) **Claims Appendix**

1. Set of equipment for a motor vehicle comprising:

- an inflatable structure comprising a side wall and an end wall, the inflatable structure having a folded configuration and a deployed configuration,
- a support for the inflatable structure,
- means for inflating the structure in a direction of inflation (D) in order to deploy the structure,
- a plate for spreading the load when an occupant of the vehicle impacts on the deployed inflatable structure, and
- means of guiding the structure as the structure deploys so that, in the deployed configuration, the structure extends along a median directrix line (L) distinct from the direction of inflation (D),

wherein the guide means comprise the side wall of the structure which, in the deployed configuration, is substantially taut, and

wherein the set further comprises a sheath forming the side wall of the inflatable structure and comprising an open first end fixed to the support and an open second end fixed to the load-spreading plate, the load-spreading plate closing off the open second end to form the end wall of the inflatable structure.

2. Set of equipment according to Claim 1, wherein the side wall of the structure has a first diagonal (d1) shorter than a second diagonal (d2) of the side wall so that, as the structure deploys, the side wall which is substantially taut along the first diagonal (d1) brings the structure towards the median directrix line (L).

4. Set of equipment according to claim 1, wherein, when the structure is in the deployed configuration, the side wall extends substantially over its entire periphery along generatrices parallel to the median directrix line (L).

5. Set of equipment according to claim 1, wherein the median directrix line (L) is intended to be inclined upwards with respect to the direction of inflation (D) when the set of equipment is installed in a motor vehicle.

6. Set of equipment according to claim 1, the set constituting an element for protecting the knees of an occupant of the motor vehicle.

7. Motor vehicle comprising a set of equipment according to claim 1.

(ix) **Evidence Appendix**

None.

(x) **Related Proceedings Appendix**

None.